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Senator Hilton is what we shall have to call our friend Geo. E. Hilton now, as he was elected to the position of Senator of the State of Michigan at the last election. It is indeed an honorable office, and bee-keepers will be glad to know that they have such able representatives of their interests in the Legislature, as are Hon. R. L. Taylor and Hon. Geo. E. Hilton. We don't care what color a man's politics may be, so long as he does not fear to always stand up and be counted on the side of the right.

"Lovely Gleanings" is what we said after reading the number for Dec. 15th, which was something of a holiday number. It well deserves to be called the illustrated bee-paper of America, as almost every issue contains such beautiful pictures. May its subscription list become longer and longer, and its "shadow ne'er grow less," is the New Year wish of the old AMERICAN BEE JOURNAL for our Brothers Root.

"Bees and Honey"—page 5.

The Time for Reading is now at hand, and in order to be equipped for all operations next spring in the apiary, you should "digest" one or more of the excellent bee-books, as well as the weekly "viands" brought to you in the BEE JOURNAL. We would refer you to our complete book-list on the third page of every number of this paper, where you will find everything that heart or mind could wish for in the way of standard and practical bee-literature. When renewing your subscription, order some good book that you can refer to as a sort of "dictionary" while reading the BEE JOURNAL.

On page 20, Mr. Doolittle has an article just packed with excellent advice for bee-keepers to heed during the winter season. Read it, and then profit by it.

Thirty-Two Years Ago this month the AMERICAN BEE JOURNAL was born. With this issue it begins its 33rd year. Many have been the changes that have taken place within its history, covering nearly a third of a century. Numerous and valuable have been the improvements from time to time that have resulted from the efforts of those who have labored for the advancement of the pursuit of apiculture.

Upon the pages of this first-born of American bee-papers have been recorded the investigations and discoveries of a people whose lives have been unselfishly

devoted to searching for the best means by which every man's table might bear upon it a pure sweet, whose health-giving properties might bless all its partakers with a happier and more grateful life.

The culture of bees and the best methods by which their product may be temptingly placed before the eye of man have enlisted the most hearty co-operation on the part of men and women in almost all stations in life. The keeping of bees for the production of honey has grown from a pleasurable avocation to one of the most useful and necessary, as well as important, industries in the agricultural development of our country. That the AMERICAN BEE JOURNAL contributed much to placing this pursuit upon the high plane which it occupies to-day is unquestioned; though in these latter years a few other periodicals have aided in the work first begun by the BEE JOURNAL through its lamented and honored editor—Samuel Wagner.

As in the past, so in the future, the old AMERICAN BEE JOURNAL will endeavor to lead, and it hopes to merit the continued support of all the honest-minded and truth-loving devotees of this fascinating and ennobling pursuit.

With all the lessons and experiences of the past from which to profit, and feeling assured of its ability to press into newer and richer fields of apicultural usefulness, the AMERICAN BEE JOURNAL to-day begins the march of another year, inspired by unnumbered opportunities for proving itself a help and a blessing to all its thousands of readers.

Bro. Hutchinson tells the story of himself in the *December Review*. He shows how he tried to look when at the age of 18 years, and also how he looked without trying at the age of 36. Those 18 years almost illustrate the theory of evolution, though Bro. H. had that same honest, straight-forward, whole-souled look when less than half as old as he

now. When looking at his later picture, one hardly knows whether to say "a professor," "a preacher," or "a soldier." He might be mistaken for any one of them, or all. His own story is a good one, and we hope soon to condense it for the benefit of our readers. That *December Review* is a good one. Bro. Hutchinson merits all the success with which his paper is meeting.

The Officers Elected at the recent meeting of the Illinois State Bee-Keepers' Association at Springfield, are as follows:

President—Hon. J. M. Hambaugh, of Springfield.

Vice-Presidents—1st, J. Q. Smith, of Lincoln; 2nd, Mrs. L. Harrison, of Peoria; 3rd, Peter Miller, of Belleville; 4th, Geo. Poindexter, of Kenney; 5th, C. P. Dadant, of Hamilton.

Secretary—Jas. A. Stone, of Bradfordton.

Treasurer—A. N. Draper, of Upper Alton.

Those wishing to have their names enrolled as members for 1893, will, by sending their fee of \$1.00 to the Secretary, receive the coming report, as well as the report for 1892.

We hope to publish the report of the convention in a short time.

Mr. Orange Judd, the eminent and widely-known editor of the *Orange Judd Farmer*, died at the age of 70 years, on Dec. 27, 1892. He was the founder, and for 30 years the editor, of the *American Agriculturist*. We published his biography with portrait in the BEE JOURNAL for Sept. 15, 1892, page 363. He will be mourned in myriads of homes where his name has long since become honored and revered. The AMERICAN BEE JOURNAL deeply sympathizes with the family in their sad bereavement.

Read our great offer on page 5.

Bee-Keepers' Union.—The following is the General Manager's 8th Annual Report, for the year 1892:

At the close of another year, it is my duty to review the work of the National Bee-Keepers' Union, and offer some comments thereon.

The influence of such an organization, and the help which its moral support renders to its members, have been demonstrated many times during the past year, and such is but a repetition of the past 8 years of its history.

"Great deeds cannot die;
They with the sun and moon renew their light
Forever—blessing those that look on them."

The limits allowed to this Report will compel the greatest brevity, and so I must enter at once upon the facts, without any further preliminary remarks.

Early in the year the city council of Miami, Mo., was petitioned to expel the bees from the city limits. An ordinance was passed and the work begun, but the influence of the National Bee-Keepers' Union was so great that the city council dared do nothing more than thus to make itself "the laughing-stock of the world."

In April, malicious hatred worked up a case against Mr. H. D. Davis, in Bradford, Vt., and threatened to prosecute him for keeping bees there. The village trustees passed the law declaring bees a nuisance, but they dare not enforce it. Copies of the Decision of the Supreme Court of Arkansas, officially deciding that "bee-keeping is not a nuisance," were freely distributed among the Trustees and those in authority, and Mr. Davis was allowed to continue to keep bees there, as he had done for 13 years before. An envious neighbor made the trouble, but he was soon squelched by public opinion, which had been created after reading the documents of the National Bee-Keepers' Union.

Down in Tennessee, in Hill City, John F. Haeger keeps bees. His neighbor raises grapes, but found them rotten because of the very rainy season, and concluded that the innocent bees had done the damage. He threatened to spray them with arsenic, to destroy the bees. He was informed that it was a dangerous thing to do, for some of the poison may get into the surplus honey, and humanity would suffer by its consumption. He was further told of the existence of the National Bee-Keepers' Union, and that its special work was to protect its members from such malicious folly. He went home to think about it, and the next day came to Mr. Haeger and apologized for his abuse of the bees and murderous intent. Mr. H. wrote thus to the General Manager: "Stick another feather in the Union's cap." Surely, its moral influence is as potent as its financial backing.

Iowa next came into line. John Foulkes, in Cascade, sued his two neighbors, who kept bees, to compel their removal. Among other foolishness he claimed that "the bees swarmed around his premises, shut out the light of day, and kept his house in dark-

ness." Possibly, the bees had stung him near the eyes, and so had shut out the light of day to him personally!

This is about on a par with the ignorance of the fellow who declared that his neighbor's bees ate up his peaches, and made a meal of his young ducks!!

The bee-keepers, Messrs. Wyrick and Hunter, were members of the Union, and the General Manager took charge of the case and employed an able attorney to defend it. The case was submitted in August, on *ex-parte* testimony, by agreement, the affidavits being very numerous on each side. The judge refused to grant injunctions, because he said it would "interfere with a business which the Courts recognize as legal." The Arkansas Decision did it! Thus ended the bombast of John Faulkes, and his malicious slanders against the bees and their owners.

Out in California a member of the Union was threatened by jealous neighbors for keeping bees in National City. It was Mr. Arthur Hanson, and he applied to the General Manager, who dosed the city officials with the official Decision of the Supreme Court of Arkansas, that "Bee-Keeping was not a nuisance!" That settled the whole matter. Peace and quietness reigns there now.

But why multiply words? All cases of trouble submitted to the Union show the same result, and this part of the Report may well be concluded with the following from the pen of that staunch friend of the bees, Mrs. L. Harrison. She says:

"The Bee-Keepers' Union has done much to cause our industry to be respected and placed upon a firm foundation. It has taught evil disposed persons and corporations that the production of honey is a legitimate business. Its able Manager, Mr. Thomas G. Newman, of Chicago, is always on the watchtower, scanning the horizon, and on the least appearance of danger is on the alert with well-directed guns. He has caused the enemy to retract and apologize for malicious statements."

New Work for the Union.

For several months there has been much discussion in the bee-periodicals, about the Union assuming new functions. As no one is able to say whether it shall or shall not do so, it is now proposed to submit it to vote.

In order to act in a legitimate manner, here comes a motion from one of the Vice-Presidents. It explains itself:

"MR. THOS. G. NEWMAN,
General Manager of Bee-Keepers' Union:

I move you that the scope of the National Bee-Keepers' Union be enlarged, so as to include prosecutions, looking to the prevention of the adulteration of honey.

Yours truly, A. J. COOK."

This has been seconded by Mr. Ernest R. Root, and supported by a number of other members.

In order to submit it to the members, I have prepared an amended Constitution,

sufficiently broad to allow of the proposed new functions and any others which may hereafter come up. It vests in the Advisory Board the power to act on any matter in the interest of the pursuit of bee-culture, presented to the Union for its action. In this way immediate work can be done without waiting for a full vote of the membership. Of course, care must be taken to put into office its best and most reliable members, (a good selection can be made from the list of names attached to this Report, and such only are eligible to office.)

I desire that this matter should receive due consideration and would ask every member to vote. Let there be no spaces unfilled when you return the "Voting Blank," to be exchanged for a Membership Certificate.

The only changes in the Constitution submitted are in Articles IV and VI. Please read these carefully, and then vote FOR or AGAINST, as you deem for the best interests of the Union.

If the amended Constitution is adopted, (it takes a majority vote to do so) then the duties of the General Manager will be greatly enlarged, and it is nothing but just that he should have a salary. I would suggest that it be decided to make that salary 20 per cent of the gross income of the Union for each year — whatever that may be.

Some have stated that it was a mistake not to have done this at the start, and perhaps it was. This matter can, however, be adjusted now, and it is therefore submitted to vote *when* such salary should commence.

By paying a percentage as salary for the General Manager, there can be no risk. The more the gross income, the more work to be done, and the more pay for doing it. The more work done, the more prosperous will be the Organization; the larger its available funds, the more remunerative to the Manager. Let every member vote as he feels on this subject, by filling up the space devoted to it on the Voting Blank.

The General Manager can do a great deal to keep expenses down. Twice during the past year I have cut the attorney's fees down one-half, and during my administration have in this way saved many hundreds of dollars for the Union. The Manager should, therefore, have an interest in continuing this watchfulness, and practicing strict economy.

The Future.

The movement now on foot to add to the membership of the Union, after enlarging its powers and multiplying its work, may make such a change that the next Report may show from 1,000 to 5,000 names.

Each of the bee-periodicals have donated a page to the Union, to assist in gaining members for 1893, and a vigorous effort will be made to place it in a position to command respect in maintaining the rights of apiarists, as well as to prosecute the adulterators of honey who now seem bent

on destroying the pursuit, if not arrested in their career of crime and madness.

Financial Statement.

Balance, as per last Report.....	\$558.58
Fees from 404 members for 1892.	404.00
	962.58
Court expenses, briefs, printing, attorney fees, postage, etc....	339.50
Balance, Dec. 20, 1892.....	\$623.08

The Union has engaged attorneys for the defense of several cases, the cost for which will have to be paid when the cases are reached on the docket.

Dues and Election of Officers.

It now becomes my duty to call for \$1.00 for the coming year, as dues from each member. A Blank is enclosed to be used for sending it, and also a Voting Blank. Fill up all the blanks, and send to the Manager with a postal note or money-order for \$1 in the envelope sent with it. It must be received by Feb. 1, 1893, or the vote will be lost.

Now comes the most difficult part of my Report. I have repeatedly stated that I ought to retire, and give place to a younger man, but the appeal comes to me from so many members not to think of such a thing, at least for the present, that I have called a halt,—to let "feelings" consult with "judgment" as to my duty in the matter.

Mr. Root, in *Gleanings in Bee-Culture* for December 15, puts it in this way: "Mr. Newman's management of the Union has been so wise and efficient, that, if it will be out of the question for him to act as chief, he certainly should be retained as assistant or adviser, in the event of the change; then, if necessary, let younger blood do the work."

In reference to this proposition, I will say that if there is henceforth to be a salary attached to the office, so that I can hire that part of the work done, which would require more time and energy than I could command, I will consent to take the office for another year, if the votes give a *decided call* for me to do so.

THOMAS G. NEWMAN, Manager.

The foregoing Report was written to be mailed to all the members of the Union, hence the reference to the Voting Blank, return envelope, etc. The Voting Blank may be found on page 4 of this issue of the BEE JOURNAL, as may also the amended Constitution. We refer the reader to page 4 for further information.

Have You Read page 5 yet?

**MR. BARNETT TAYLOR.**

The following biographical sketch was kindly furnished by a friend of Mr. Taylor's, who knows him well:

The subject of this sketch was born in Green county, Pennsylvania, on May 8,

**BARNETT TAYLOR.**

1830. His father died when he was two years old, and he remained with his mother until his 16th year, when they moved to Quincy, Ills. There he lived nearly three years, one of which was spent in the army raised by Gov. Tom Ford to disperse the mob that killed Joe Smith in the spring of 1845, and drove the Mormons from their homes at Nauvoo in the fall of that year. Here it was he worked in a printing and book-binding office. Afterwards he moved to

Green county, Wisconsin, in the fall of 1848.

At the age of 17 years he had mechanical skill enough to do the inside finishing for the Methodist church, which, when completed, gave entire satisfaction.

In the spring of 1849 he secured his first swarm of bees, which increased to many colonies in a few years.

Mr. Taylor remained in Wisconsin until 1856, when he moved to his present home in Forestville, Fillmore county, Minn. Immediately he purchased a colony of bees, which he increased to six the first season, and to 31 the second, and he sold \$175 worth of surplus honey. His bee-keeping up to this time had been with box-hives, in the old style. At this point he secured "Langstroth on the Honey-Bee," and also obtained the agency for Langstroth's movable-comb hive, and began bee-keeping in a more scientific manner.

He at once became dissatisfied with the guess-work of the spacing frames, and being of an inventive turn of mind, invented the wire-end frame as now used in his hive, which he considers the most practical frame and hive in use since 1857.

During all these years he has given bee-keeping his best thoughts, and doing the (to him) delightful work with his own hands. He has increased his colonies until he has produced 26,000 pounds of fine comb honey in one season, and Mr. Taylor says that he has never had such an interest in his bees, or felt so happy in his apicultural work, as at the present time.

At the Taylor homestead there is to be found one of the best equipped apiaries in the West. There may be larger apiaries, but perhaps none so complete. There is everything with which to do, and harmony and cleanliness go hand in hand. It is a most lovely spot, nestling at the foot of the hill on the Forestville road, and surrounded on three sides by fine, old trees, not forgetting the massive pines which fringe the road leading to the place. From the apiary can be seen the north branch of Root river, winding in and out, leaping onward over the stones and through the willows.

Here, endowed with Nature's best gifts to man—grass, wood and water—is situated the Taylor apiary. Scattered upon the hillside are to be seen hundreds of Mr. Taylor's hives. One can see the handsome machine shop complete with steam power and cunning machinery; the wintering cellar, built upon honor,

thoroughly painted, and strong as a castle; also the curing house, and the much-talked-of house-apiary, all thoroughly painted and kept in excellent order. This order and harmony pervades everywhere and everything, even to his swarm-catcher.

His handiwork is to be seen in everything, including a bee-escape. We spoke of the cunning machinery. This was all invented and made by his own hands, and is so perfect in workmanship and finish as to cause remark by all who examine it.

Across from the apiary on the left are acres of as fine fruit as is grown in the great State of Minnesota. Apples there are of many varieties, and the ever-greens and flowers go to prove that Mr. Taylor is an enthusiastic horticulturist, as well as a scientific bee-keeper, and has done much to advance the growing of fruit and the adorning of homes in his section with ornamental trees.

Mr. Taylor is one of the assistants to Hon. O. C. Gregg, in preparing the "Farmers' Institute Annual," issued once a year, and is the editor of the bee-department, as he is also the "Apiary" in *Farm, Stock and Home*, and for years has contributed valuable information to the several bee-periodicals.

In conclusion, Mr. Barnett Taylor is a good, plain, everyday man, honest from the ground up, and thoroughly trusted by all who know him. He would scorn to do a wrong, and has a pure heart and clean hands, honored by all, and admired by many.

The Programme has been sent to us, of the 4th annual convention of the Minnesota State Bee-Keepers' Association, to be held in the Lumber Exchange, corner of Fifth street and Hennepin avenue, Minneapolis, Minn., on Thursday, Friday and Saturday, Jan. 12, 13 and 14, 1893.

Latest and Prettiest Song now being sung on the stage, is entitled, "The Indian Summer Time." It is by the popular author, Will L. Thompson, of East Liverpool, Ohio. The price is 40 cents. Send the author half price, and you will receive a copy.

Don't Fail to read all of page 5.



CONDUCTED BY

Mrs. Jennie Atchley,

GREENVILLE, TEXAS.

Bee-Keeping and the Home.

DEAR READERS:—As I sit at my desk this drear day, wondering what I could write or say that would be most likely to interest you, my mind falls upon home; and while I expect to be as original as possible, in all my writings, please excuse me if I make extracts at random from something I have read, in order to make my meaning more clear. I expect to use this department to advance bee-culture, at the same time it is necessary to mention our homes occasionally, as bee-keeping and our homes are very closely related. It is the desire and design to furnish, through the medium of this department, a place for honest discussion and an interchange of views for all the bee-keeping fraternity, and as its name implies, to those of the Sunny South especially.

I know of no way in which greater benefit can be derived than by a comparison of our methods with those practiced by others, and I cordially invite every one to make such use of the pages of "Sunny Southland." I am surprised sometimes to find that the most commonplace of my daily duties are performed very differently by the bee-keepers and house-keepers of other sections, and I am always interested in diversified ideas and customs. It will not do for one locality or section to claim all the desirable points in everything. Each has much to learn from the others, and the best results are obtained by combining the good and discarding the evil from all sources. Strive for that equalization of plans and achievements which will insure to the benefit of the greatest number.

If you find that another method accomplishes a desired end more readily and satisfactorily than the one you have been using in your own house or apiary, adopt it rather than cling to the old,

simply because it is *your way*. Make "Improvement" the watchword of your home and your apiary. Improve your mind; improve your methods; and also improve your surroundings.

There are homes and apiaries in this Sunny Southland of ours that has been of a monotonous sameness for years. I need not say that these are not the happy homes, or prosperous apiaries. The great ocean must move in order to avoid stagnation, and homes and apiaries must advance, or they will retrograde. Let us bring the products of ingenuity to our aid, borrow and lend the results of experience until all shall know the pleasures and benefits of well-directed efforts in the art of bee-culture and proper living. Let every wife and mother of all sections fully co-operate in improving our homes, and systems and home surroundings, which means the apiary as well as the front yards and gardens, thereby uniting on a most effective plan for elevating American manhood and womanhood.

Again, I say, let us make it our first object in all things to bring the most good to the greatest number. What a change might be wrought in the conditions of mankind by the application of this rule! How unselfish and how far-reaching as compared with seeking the *greatest good* of a chosen few. There is a great deal of work to be done, and the fields are white with the harvest. What part will *you* take in this great and grand work of helping others? It may be by this poorly written article, or it may be by personal influence in your own home and neighborhood; widely different are the means capable of application, but there is work for all.

For whosoever shall give you a cup of water to drink in my name, because ye belong to Christ, verily I say unto you, he shall not lose his reward.

After proper home influences, we have a subject in whom each seed sown should bring forth good fruit. For such a person the scenes of nature and the incidents of life all teach lessons for the broadening of the mind and the development of the soul. Travel will open new avenues of thought at every change, and books will prove mines in which most precious gems are stored. All fellow creatures should be teachers, and each note of nature should awaken new and deeper instincts for good. In such a person happiness is ever present, and must light the way for all associates.

"Bees and Honey"—see page 5.



Drones for Breeding Purposes— A Large Question.

Query 852.—1. Would it be safe for me to rear drones from pure Italian virgin queens to breed from, with respect to the purity of the future progeny, since it was held by a majority of those answering Query 843 (see page 598—1892), that there was no difference between eggs as they existed in the ovaries of virgin and impregnated queens? 2. If not, why not? 3. Would not the experiments of Mr. Doolittle and other prominent apiarists along this line, by mating pure Italians with black drones, and continuing to mate for two or three generations pure Italians to the lineal drone descendants of this first progeny or drone offspring of a pure Italian and black drone, in which case they obtained drones from pure Italians showing marks of impurity, show that the eggs in the ovary of a pure Italian virgin are different from the eggs in the ovary of a pure Italian that has mated with a black drone, the theory of parthenogenesis and its exponents to the contrary notwithstanding?—P. R. O.

Yes, don't do it.—JAMES HEDDON.

1. Let those who have differed on this point, answer this. 3. Yes.—JAS. A. STONE.

I don't know anything about it, but I believe the male has some influence on the offspring with bees as well as with other folks.—E. FRANCE.

All I have time and space to say now is, that I now hold the ground that the drone is affected by the mating as well as the worker, but may be not so much.—MRS. JENNIE ATCHLEY.

I see no good reason for doing so. Though it might be safe, I should prefer to follow only safe, well-known rules for breeding the purest and best bees, as well as other live stock.—C. H. DIBBERN.

1. This is a pretty tough question for a starter, but I will venture a *yes*. 3. The trouble is they cannot be *sure* how their queens were mated, whatever they may say to the contrary.—J. H. LARRABEE.

Drones from a virgin queen must of necessity be of the same "blood" as their mother; but the trouble which meets us here is, that many who have

experimented carefully claim that drones from a virgin queen are not virile. Such being the case, all queens producing worker-bees must have mated with drones from a fertile queen.—G. M. DOOLITTLE.

1. It would, but not as likely to get strong, healthy stock. Follow the course of nature as nearly as possible. 3. There are too many possibilities connected with these experiments to consider them a safe and infallible guide.—MRS. L. HARRISON.

1. I think so, if one could do it. Virgin queens do not always lay eggs. See my article on reproduction soon to be published in the BEE JOURNAL. 3. Yes, granting there is no mistake; but how can any man be sure that his queens are certainly pure with no trace of black blood.—A. J. COOK.

1. No. 2. Such drones would not prove fertile. 3. Such experiments, I believe, must conform to the above rule. The recent article of our worthy brother, G. W. Demaree, was just "my sentiments." The progeny of an Italian queen mated to a black drone, must of course be tainted.—W. M. BARNUM.

1. I do not think it would be safe so to do. 2. This opens up too big a question to be answered in this department. 3. The doctrine of parthenogenesis is proved to be true, still the doubt remains as to how far impure copulation affects the drone progeny. It is safe to breed from pure drones—why not do so?—J. E. POND.

1. I think not. There is no necessity for such a course, *even* if such drones were certainly fertile. In my late article in the BEE JOURNAL I have laid down the proposition that it can be demonstrated by experiment whether or not the drones of a *virgin* queen are fertile. Until this is settled, it is useless to discuss probabilities.—G. W. DEMAREE.

No; leaving the scientific discussion of this subject to naturalists, and to those who have time and talent for lengthy experiments, I will say to the propounder of 852, if he wishes good bees, not to depend upon drones reared from virgin queens, for the conditions necessary to the rearing of good drones will be greatly lacking in a colony that cannot rear worker-brood.—S. I. FREEBORN.

Parthenogenesis is not a theory. It is a fact. The assumption that the drone progeny of a queen are in no way

affected by her mating, is theory that has not been proven, and perhaps cannot be. I think it likely that they are thus affected. The question is of little practical importance. It would not be profitable to rear drones as you suggest, even if they were as good as any as breeders, and you would have to rear drones from a number of such queens, in the average locality, to stand much chance of their being valuable under any circumstances.—JAMES A. GREEN.

1. I believe that drones from virgin queens, and even from laying workers, are virile, and as potent as any. I believe that the drone progeny of a queen is unaffected by the drone she has mated with. 3. I do not think that any experiments prove that there is any taint in the drone progeny of a queen from the drone she has copulated with. There are too many sources of mistake for experiments to be of much value.—M. MAHIN.

1. Yes, so far as regards purity, but generally, no. 2. Because drones reared from a queen that did not succeed in getting mated, and in a weak colony of old bees such as hers would be likely to be, would probably be wanting in vigor, and of a race wanting in good qualities generally. 3. The mating of bees for several generations is too uncertain a thing to base any scientific conclusions upon—at least in most localities.—R. L. TAYLOR.

We are told that in some cases in the human race, after a white woman has had a child to a black father, subsequent children to a white father may show traces of black blood. Something like this may hold good with bees, but for practical purposes I should be satisfied with drones from a thoroughbred queen impurely mated. But how could there in any case be impurity in "drones from pure Italian *virgin* queens?"—C. C. MILLER.

1. No. 2. For the reason that all experience has shown that the drones of virgin queens do not possess virility, and are therefore worthless; although theory and scientific deduction proclaim to the contrary. 3. Yes; but the difference is probably in the elemental life forces imparted to the eggs rather than in material substance.—G. L. TINKER.

Have You Read that wonderful book
Premium offer on page 5?



Report of the Michigan State Bee Keepers' Convention.

Written for the American Bee Journal

BY W. Z. HUTCHINSON.

The Michigan State Bee-Keepers' Association held its 27th annual convention in the Senate Chamber at Lansing, on Dec. 13 and 14, 1892.

The meeting was called to order at 11 a.m., but so few were present, that it was adjourned to 2 p.m. When the convention came to order at the appointed time, the following members paid their dues:

T. F. Bingham, Abronia, Mich.
 Prof. A. J. Cook, Agricultural College.
 H. D. Cutting, Tecumseh, Mich.
 James Heddon, Dowagiac, Mich.
 Geo. E. Hilton, Fremont, Mich.
 M. H. Hunt, Bell Branch, Mich.
 W. Z. Hutchinson, Flint, Mich.
 H. J. Kusig, Ravenna, Mich.
 Jacob Moore, Ionia, Mich.
 J. A. Pearce, Grand Rapids, Mich.
 R. L. Taylor, Lapeer, Mich.
 M. White, Wheeler, Mich.
 F. W. Wunsch, Lowell, Mich.

It will be seen that the attendance was very slim, but most of those present were leading bee-keepers, and for the number present there was an unusually interesting time.

First upon the programme came the address of Pres. R. L. Taylor, which was as follows:

The Apicultural Outlook.

I am impressed with the idea that the bee-keeping fraternity are just now in a state of unrest. I do not refer to that healthy state of activity so desirable and necessary to the attainment of the highest success, but to a thirst for "big things," a straining after the unattainable discontent with moderate returns, and spirit of complaining at the recurrence of poor seasons. This condition is indicted by the desire so often expressed for non-swarming bees and non-

swarming hives; by the rumors about comb honey made from sugar; by the fussing with self-hivers, and by the hints about abandoning the business.

Bee-keepers are not peculiar in being subject to this condition. We can all perceive it in farmers, even if we do not see it in ourselves among them. On the return of ordinary seasons after a period of unwonted prosperity, dissatisfaction and complaining, and new schemes, lift their heads in all directions. Individuals may indeed escape this disease, but there is no class but feels it on occasions in some degree. What is the cause of this unsatisfied and restless state among those interested in apiculture?

The golden age of apicultural invention is comparatively recent. The beginning of the movable comb, of comb foundation, and of the extractor are within the memory of many of us. Instead of considering these inventions as of themselves constituting a well-rounded period, many have been prone to regard them as only the beginnings of an age of brilliant discoveries to be continued indefinitely; but time has left those inventions 25 years away, and their results have all been gathered up and utilized, and the field is like a played-out gold-mine.

During all this time, of course, great progress has been made, but there has been no invention which can stand even second to any of those mentioned. This has been a disappointment, and this disappointment is giving utterance to the question heard on every side, What is to be the next great invention in apiculture? The thought is, that it is high time for another great stride forward. Apiculture is looked upon as almost equal to electric science as a field for discovery. How wide the difference is between the two it is hardly necessary to point out.

The electrician has the agent—electricity—and knowing its nature, capabilities and laws, he seeks in accordance therewith a medium by means of which he can compel it to accomplish a certain definite desired end.

The apiculturist's desired end is a wonderfully better bee. His object is indeed not very definite, but how utterly he breaks down in his means, and in his knowledge of the capabilities of the bee. He sends his money for descendants of this one's one-hundred dollar queen, or of that one's red-clover queen, or of the other one's non-swarming queen. He forgets that the bee has been undergoing for ages untold the sharpest possible course of training calculated to develop

in the highest possible excellence, that quality in which all bee-keepers delight—the ability to gather nectar. In that school the lazy, the delicate, the diseased, died of starvation or exposure, leaving no progeny to perpetuate their weaknesses.

The longest tongued industrious ones, having abundance of honey in the spring, were out of all proportion the most prolific in swarms, and so rapidly crowded those of shorter tongues and less careful, to the wall. How futile it would seem to be to attempt, by any even ordinarily careful methods, to improve bees thus effectually cleared of culls, when one great object of modern bee-culture seems to be to cuddle and strengthen the weak, and so enable them to propagate their failings.

Or, again, the apiculturist wants bees that have no desire to swarm, not reflecting that he might as well attempt to rear a race of doves with no inclination to mate.

Or, he looks longingly for the advent of the coming self-hiver, when he should know that no one would want them at the price it would be absolutely necessary for him to pay.

Or, having lost faith in every hoped-for discovery that seemed to promise easy wealth and relief from labor, and utterly discouraged, he turns as a last resource to sugar for comb honey, not perceiving the twin mountains his train is about to plunge into head on.

What a strange and impracticable class the fraternity of bee-keepers is, but it is much like other classes of humanity. Give one of them an inch, and he will take an ell, if he can get it.

You have a cow, we will say. You must be at expense for food for her for every day of the year, and a good deal of it if she is to yield any profit. You must feed and water her two or three times a day, or take her to pasture in the morning and fetch her again at night. You must milk her twice a day, and every year you must fuss with a calf for a tiresome period; yet, notwithstanding the almost constant care and labor, you are not calling very loudly for a self-milker, nor for a "non-swarmers," that is, for one that is calf-proof, however desirable such a cow might be; nor for a "self-hiver," that is, for a contrivance that would enable the calf to take care of itself.

But your colony of bees, which you need "milk" but once a year, and feed seldom if ever; whose progeny you can care for good and all in five minutes, which comes so near working for nothing

and boarding itself; it, forsooth, is felt to be a burden on account of the little supplementary labor necessary for its care, and because you are relieved of so much you are scarcely willing to be thankful for that relief, unless you can also be relieved of the little necessary care and labor remaining.

The moral is, that it is not wise to want the earth. By trusting too much to what the future may seem to promise, we are apt to neglect what the present actually offers. R. L. TAYLOR.

Prof. Cook—For once I must take issue with my good friend, the President. It seems to me that bee-keepers have a good deal to complain of during the last few years. They have not had very much of the earth of late, and *ought* to complain. When things go wrong, I think we have a right to be dissatisfied. We ought to at least be so dissatisfied that we are willing to try to find a remedy for our troubles. I believe in encouraging this kind of dissatisfaction. Then, again, I think the figure of the mating of the doves is too strong. Swarming is not mating. The mating principle is stronger than that of swarming. Some colonies do not swarm. There is a reason for this. If we could find out this reason, we could prevent swarming.

James Heddon—I agree with the Professor. I think it possible to breed a non-swarming strain of bees. I think that bees swarm less than in days past. To be able to have bees stop swarming would be one of the greatest advances that bee-keeping has ever made. I think that both the President and the Professor are right. I agree with the President, that bee-keepers ought not to become discontented. They should keep steadily on, and not be carried away by side issues. The dish must be everlastingly kept right side up; but there must be enough discontent so that bee-keepers will ever be striving to better their condition.

The Adulteration of Honey.

Mr. H. D. Cutting was down on the programme for an essay on the above subject, but he plead guilty to not having finished his essay. Several asked him to read what he had written. They wanted to see right where he "blat" it off." He didn't have the few pages with him, but said he had been through the Detroit markets looking for adulterated honey, and found only two samples. Continuing, he said that "Two birds

of the peanut candy is glucose. The people demand it." As the boy said, "he wanted something that he could chew." Pure sugar won't make such a candy. I would favor laws to prevent adulteration, only the laws are evaded.

Prof. Cook—I think the law all right. I have a right to mix glucose with honey, but I must say what it is when I sell it. As I said, I think the law all right, but it must be enforced, and this duty does not belong to one man; it belongs to the Bee-Keepers' Union.

Pres. Taylor—I think the law is all right, the trouble is in its enforcement.

Mr. Heddon—There is no trouble in enforcing the law against murder. People dislike to be murdered. There is no trouble in enforcing any law that the people care enough about to have it enforced. The trouble with enforcing the laws against the adulteration of honey is that the public care very little about the matter. They see the stories in the newspapers about adulteration, but they like the honey that they buy, it agrees with them, they are healthy, and some of their neighbors disagreeably so, and the result is that they don't know nor care whether honey is adulterated or not.

Now I am going to do a little prophesying about this matter of the adulteration of honey. You know that years ago I was abused and called unpleasant names, etc.; because I plead for priority of location, and kept everybody out of my field. How is it now? Every man wants his field, and to encroach on the field of another is looked upon as unfair. I also opposed the idea of persuading everybody to engage in bee-keeping; again I was called selfish, but this making bee-keepers of everybody has been dropped, and bee-keeping has sought its level, as all business will. It has gone below its level, and will probably rise again. Now what I am going to say of adulteration will probably bring down another shower of abuse, but I am going to say that I think that the adulteration of honey has never injured bee-keeping; that it has rather been a benefit, and that in a few years all this hue and cry among bee-keepers over the matter will have died out. Yes, I know such views are the rankest kind of heresy, but they are my honest opinion.

Glucose was first obtained by those careful French and German chemists that have been held up to us as models. When its manufacture was first begun in this country, it is possible that it was somewhat crude, but as it has been made for years, I believe it is as healthful as

the corn from which it is made. It was first used to mix with cane syrups. The manufacturers of the syrups raised a howl, they held up both hands, on one was painted "horror," and on the other "poison." They thought their business was going to be injured, and they sought to prejudice the public against the newcomer. But the demand for "blackstrap" increased wonderfully. It was learned that the stronger and blacker the syrup the more glucose was needed to bring it to the right flavor and color. The opposition from sugar syrup makers was soon over.

About this time the hue and cry was taken up by some of the bee-papers, and the same changes were rung over again with variations. Has the use of glucose in cane syrups injured their sale? Everybody knows that our "golden drips" are largely glucose, yet they buy them just the same. There is no attempt at concealment. Go into a store and ask for almost any brand of syrup, and inquire if it isn't part glucose, and the answer will be, "Certainly." The fact is, that those strong, dark cane syrups have been improved by the glucose, and everybody knows it.

It is the same with confectionery, as Mr. Cutting has said. It has been just the same with those who have adulterated honey. They have sought for the strong, weed honey, as it would bear more glucose. Time and again have C. O. Perrine and Mrs. Spades bought my strong fall honey and paid me a good price for it because it was the kind of honey that would be improved by the addition of glucose. They put their goods up in good shape, and could out-sell me every time. They would get \$9 a dozen for their glasses where I got only \$6, and the worst of it was they were not troubled by the granulation of their product, while I had often to take back goods and re-liquify them. I once sold \$1,700 worth of honey in jars to D. D. Mallory, of Detroit, and had to take back half of it and melt it up again. The people who sold mixed goods had none of this trouble. They sold to the same customers over and over again, which they could not have done had not *their* customers been satisfied. They made a market for our strong fall honey that otherwise would have been scarcely salable; they pushed its sale, and kept the markets supplied, and I say they have not injured the bee-keeper nor the public.

Now, if we are going to fight adulteration, let us decide why we fight it. If it does not injure us, then why fight it? Is

it because it is wrong? If so, then let us attack it where it is doing a thousand fold more harm—in *cane syrups and confections*. If glucose contains so much death-dealing damnation, what untold miseries it must be causing among the consumers of these two articles. Let's attack it there and save the prejudice that must attach to our own product from our continual harping on the subject.

There is one other point that I want to call attention to, and that is that a honey-producer with the right kind of bees and appliances and management, can always produce honey cheaper than he can buy glucose. All this talk about adulteration is the height of folly. No one is practicing it except the city dealers, and they do not injure us if they do piece out a poor season and keep up a demand that they have created. One or two good seasons will stop adulteration so completely that it will amount to nothing.

JAMES HEDDON.

Prof. Cook—Mr. Heddon may be right. I have tried to get bees to take glucose, and failed. I have tried mixing glucose with honey, and it certainly was not good. If the grades of glucose that Mr. Heddon has mentioned are really wholesome; if its addition to some grades of honey really improves them and aids in their sale, I have said my last word against adulteration.

The Professor agreed to bring samples of honey and glucose mixed, and submit them to a "tasting committee," and the discussion was dropped to listen to the reading of an essay by W. Z. Hutchinson, on

The Production of Sugar Honey.

The Secretary has asked me to answer the question, Shall we produce sugar honey? First, allow me to give a brief history of the discussion that has been conducted on this subject.

About a year ago the *Review* asked its principal contributors to say what should be done if the poor years keep on coming. When the turn came for the inimitable E. E. Hasty to speak, he said, "Produce sugar honey." I knew that this had been tried before, at least there had been reports to that effect, but it had been looked upon as adulteration. It seemed strange that so conscientious a man as Hasty should advise such a course. He then went on to defend his position. He said that bees *do* make honey in the same sense that brick-

makers make brick. The nectar of flowers is almost wholly cane-sugar, which the secretions of the bees change to glucose, or honey. If by any artificial means we could gather a gallon of nectar and evaporate it, the product would be cane-sugar instead of honey. Mr. Hasty argued that it made no difference whether the bees got their cane-sugar from the flowers or from the sugar barrel.

I knew that bee-keepers had never looked at the matter in this light, and felt that the public opinion would not approve, but I also knew that prejudice and preconceived notions are things that can be overcome, also that our greatest blessings are often rejected when first offered. I had frequently fed sugar for winter stores, and the white combs were so dainty that I had often yielded to the temptation to cut out small bits and taste them. When I remember the smooth, oily, mucilaginous, twangy, honey taste of these bits of sugar-fed honey, I did not know but our Hasty friend was correct, and I decided to follow the course that had always characterized the *Review*, that of allowing everybody to be heard, even if their views were peculiar.

The article was published. I expected severe criticism, but not in the form that it came. Everybody seemed to jump to the conclusion that the feeding of sugar was to be done with the intent to deceive. Right here allow me to call attention to the fact that no one seems to worry for fear that basswood honey will be sold for clover, or that golden-rod will be palmed off for buckwheat, but all feared that sugar-honey would be sold for clover, or basswood. If sugar fed to bees becomes honey in the fullest sense of the word, then it *is* honey, and to sell it for honey no deception.

The criticisms that came in were published, when, to my surprise, such men as G. M. Doolittle, Wm. F. Clarke and C. W. Dayton came to my support. Their views were published, and the result was that red-hot letters on both sides of the question came pouring in. At such times men do not reason coolly, and sharp, unkind, cutting remarks are made, hence I thought best that the matter be dropped until the first excitement had worn away.

In a few months Prof. Cook published statements showing that chemical analysis, a class of forty students, and the best Cook that he ever knew could not detect the difference between sugar honey and floral honey. It seemed a good time to try to decide what honey

really is. I knew of no one better qualified than Prof. Cook to answer that question, so I asked him to write an article having for its title: "What is Honey?" That article was really an out and out defense of Hasty's position.

I then decided that the subject should be discussed; that our best men should say in the *Review*, if they would, what they thought of the practicability and advisability of the scheme. You who read the *Review* know what has been said, and can judge for yourselves as to what you had better do.

It seems to me that the first question to be decided is, When sugar is fed to bees does it *really* become honey? If nectar is cane-sugar, and its manipulation by the bees changes it to honey, then cane-sugar made from the juice of the sugar-cane evaporated, clarified and then made into a syrup, becomes *honey* when manipulated by the bees. It is true that each kind of blossom furnishes a flavor, and in some cases a color, that is distinctive. It is true that some kinds of blossoms furnish but *little* flavor. Willow-herb is one of this class. Sugar-honey has a kind of spicy, sugary flavor that is not at all unpleasant; but, as Mr. Doolittle has explained, enough of any kind of floral honey can be added to give the distinctive flavor if desired.

When I produced some sugar-honey, my wife was prejudiced against it. Now we use it on the table every day, and it is her choice. Knowing what I do now, if I should go into the market and buy a section of honey without knowing what kind of honey it was, and it should turn out to be sugar-honey, I should not feel that I had been cheated. In fact, I should prefer it to a great many kinds of floral honey.

How will the public look at the matter? Candidly, I don't know. How does it look at the use of comb foundation in section-boxes? There was once a great hue and cry raised against the use of foundation in sections. Many persons were not clean in the rendering of their wax. The old combs were allowed to stand until inhabited by disgusting worms, and the combs fouled by their excrements, then the whole mass was cooked up and the wax squeezed out. U-g-h-h! Who wants to eat the stuff? Then it was not the work of the bees, it was artificial. It was tough and leathery, and its use would ruin the honey market. Not one in ten of the honey-eating public knows anything, or cares anything, about comb foundation. Is it wrong to sell them honey made on foundation without telling them that it con-

tains the "fishbone" made from beeswax that has contained disgusting worms, and perhaps been rendered by the use of sulphuric acid? Nothing is ever said of these matters, and bee-keepers think it is all right, simply because they have been so *educated*.

This matter of education is a great thing. If bee-keepers should take every means in their power to inform the public in regard to sugar-honey, it would be a failure so far as informing the public is concerned. See how we have worked to educate the public in regard to the difference between strained and extracted honey. When you use the word "extracted" in speaking to one not connected with bee-keeping, nine times out of ten the use of the word must be explained. The honey consuming public know but little, and care less about these things. They go into the market and buy what suits them. Very few people go to market to buy *basswood* honey, or *clover* honey, or *sugar* honey—it is simply *honey*. It looks nice, tastes good, satisfies hunger, and that is all they know or care. Mind you, I don't say that everybody is thus ignorant, but the *majority* are, and *will remain so*.

If we produce sugar-honey and tell our commission man that it is such, and ask him to so inform the retailer, and have *him* inform the consumer, somebody in the line will, forget, and the consumer will never hear of it any more than if we should take all this pains to have him know that it was *basswood* honey that we had sent to market, or that our honey was produced on foundation, and the *great* question is, Would such a course *wrong anybody*? I should be glad to hear it answered.

But to the question, Shall we produce sugar-honey? I say let us not put away the cup until we have tasted. I do not say to everybody, go to producing sugar-honey, but I do say that the subject is worthy of consideration and experimentation. Just take one colony next August, when the bees are gathering nothing, and feed them sugar, and let them build combs, or furnish them foundation, and then consume the product yourself, and you will then know for yourself whether you would be willing to have such honey sold to you for honey.

Many seem to fear that sugar-honey will be produced so cheaply that it will reduce the price. All seem to forget that sugar-honey will always cost as much as floral honey, plus the cost of the sugar and the labor of feeding. Where is the profit, then, in its produc-

tion? There is not so much as there is in floral honey, but is vastly better than to produce *no crop at all*. The advance of civilization has largely crushed out a large share of the honey-producing flora, and it is no wonder that the fertile brain of E. E. Hasty suggested what may eventually become one of the greatest blessings that have been given to bee-keepers.

To my mind, this is not a question of producing sugar-honey at a loss, or of its injury to the market, as I have no fears of either, but will its production and sale, in the open market, under existing circumstances, work an injury to my fellow man? If it will, no one is more anxious than myself to know it. I simply desire to know the truth—can man desire more?

W. Z. HUTCHINSON.

T. F. Bingham—Would sugar-honey be as good for sore throat?

Prof. Cook—I don't know. I don't know what it is about honey that does a sore throat good. Sometimes we want something that will produce irritation. In that case I should say basswood honey is what is needed.

Pres. Taylor—I would like to ask Prof. Cook, if he were producing sugar-honey, would he sell it as *honey*?

Prof. Cook—I should. I agree with the essayist in every point.

Jacob Moore—Suppose some one should ask me if my honey was clover, and I should say that it was sugar-honey, and then they should say that they could make their own sugar-honey.

Prof. Cook—When they tried making simply sugar syrup (for that is all that it would be), they would soon discover the difference.

T. F. Bingham—I think this discussion is unfortunate. There is a peculiar mystery about honey that is very fascinating.

Prof. Cook—We need not fear the results. Sugar fed to bees becomes honey. There can be *no question* of this. The only point is, can it be produced at a profit?

T. F. Bingham—The product is undoubtedly good; but the question is, how will the public look at it? You say that you fed 23 pounds of sugar syrup to the bees in one night, yet they transformed it into honey. I do not see how they could do it so soon.

Prof. Cook—They have great glands that are continually pouring out the acid that transforms the cane-sugar into the glucose of honey, and it makes no differ-

ence whether that cane-sugar comes from the flowers or from some other source.

□ James Heddon—Yes; but Professor, I do not see how there can be any flavor.

Prof. Cook—There is not the distinctive flavor of any flower. There is a *honey-flavor*, if that is the proper word.

W. Z. Hutchinson—I should say that it had a kind of spicy, or cane flavor.

(Concluded next week.)



How the Bee-Keeper Should Prepare for Next Season.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

The apiarist who is to be successful has little time to waste, and if any have started into the bee-business on the supposition that "bees work for nothing and board themselves," they had better leave it at once, for no success can be attained along that line.

As soon as the bees are properly prepared for winter, which should be done as early as Oct. 31st, we are ready to go to work for next season, and so we commence operations at once, remembering the proverb of the ancient wise man who says in the good book, "Seest thou a man diligent in business, he shall stand before kings."

The first work is to get the wide frames and sections, which have been in use the past season, in readiness for the next harvest. Get them around, and scrape off all the propolis adhering to the tin separators, and all the bits of comb that are fastened to the bottoms of the wide frames. All these bits of comb should be saved, and to best save them the sun wax-extractor should be close at hand, and all waste pieces of comb put into it during the whole season. As often as it is full, take off the cover and allow "Old Sol" to get out the wax, and have it ready to fill again.

All sections which are partly filled with honey, should have the honey extracted from them (unless you think you will need it to feed in the spring), as the honey will not correspond in color with that which the bees put in to finish out the sections the next season. To extract this nicely, fix a shelf close to the ceiling of a room, put the honey thereon, and keep the room so warm that the mercury will stand at 90° to 100° for three or four hours before you extract. By placing the honey near the ceiling, it does not require nearly as much fire to heat it as it would if placed on the floor or a bench.

These partly-filled sections, if extracted without warming, would be ruined, and the apiarist's prospect of a large yield of honey the coming season would be much impaired also, for these combs are better, to him, than money in the bank, when used as "bait sections."

After the honey is extracted, these sections are to be put in the center wide frame for each hive, so as to secure an early commencement of work by bees in the sections, and so the full sections shall not all come off at once, which will cause the bees to be loth to enter a second set. Fill the rest of the wide frames with empty sections, each having a starter of nice white comb or comb foundation attached to the top.

To put on this starter, get a flat piece of iron and heat it, hold the starter close to the top of the section (now turned bottom side up), draw the iron under the starter, and immediately place it (the starter) in the right position, and it becomes a fixture.

After having your wide frames all filled as directed, pack them away so that they will be ready for use at a moment's notice next June.

The next work is to get out material for more section boxes, if we have machinery, or to purchase the material in the flat if we do not get it out ourselves. It does not matter so much how it is obtained, as when it is got ready, for if put off until just before the honey harvest, the result almost always shows a greater or less loss.

To arrive at the number we wish, if we allow 100 one-pound sections for each old colony in the spring, we shall find the estimate not far out of the way, as I have proven after several years of experience. It is well always to be sure to have enough, for it is far better to have a few sections left over than to have "our pile" become exhausted in the midst of a good honey-flow. As soon

as the sections are on hand, furnish each one with a nice starter, and pack them nicely away.

Next, we are to make or get what hives we wish, together with more wide frames, if we think more will be needed. Fill all of the wide frames from the pile of sections as before directed, put a strip of foundation in each brood-frame, and pack all nicely away. This strip of foundation is placed in the frames as a comb guide, where they are not filled full of foundation. I use a strip three-fourths of an inch wide, and, to fasten it to the frame, get out a board which is the size of the inside of your frame, and only half as thick, which is to be fastened to another board a little longer, having a handle to it, so that it can be easily held in the left hand.

Now lay the frame on the thin board, and then place the strip of foundation on it, and next to the top-bar of the frame. Now tip the board to such an angle that the top-bar of the frame and the strip of foundation will make a V-shaped trough, which is to be so inclined that when the melted wax is poured in at the upper end it will immediately run down to the lower end, which (the melted wax) in passing along adheres to both the frame and foundation, thus fastening the strip of foundation securely.

Then there are the shipping-cases for the honey to be prepared; shipping-cases for queens, if we rear queens for sale, etc., etc., all of which should be prepared during the wintry days, so that when spring opens we shall have nothing to do but to give our whole attention to the bees.

Above all else in importance, is a thorough knowledge of apiculture, and during the long winter evenings which are here, is just the time to gain this knowledge. Get around the back numbers of the AMERICAN BEE JOURNAL, and other bee-papers if you have them, and thoroughly read them, so as to put what you learn in practice the next season, so as to be always advancing instead of standing still or retrograding. Do this instead of spending your evenings at the store, saloon or hotel, listening to the idle gossip, or worse than gossip, and, my word for it, you will make a success of bee-keeping which will astonish those about you.

Borodino, N. Y.

Great Premium on page 5!

The Packing-Case Method of Wintering Bees.

Written for the American Bee Journal

BY J. A. GREEN.

It is now near the end of December. According to the advice usually given, bees should have been fully prepared for winter two months or more ago. This advice I have frequently given myself, and I am afraid that I would have been inclined to call the bee-keeper careless and negligent who should put off preparing his bees for winter until so late a date as this. Yet I did not finish packing my bees until last week.

Most of them, it is true, were ready for winter long ago, but 50 or more colonies were left to take their chances until quite recently. This was not wholly due to either intention or negligence. First, my helper deserted me just as the fall work began, and then an unusual amount of work presented itself. Then we sold the old home where I had lived all my life, and it became necessary to hunt up a new place and remove to it, which was a serious undertaking, and consumed several weeks of time. Then I had always wintered a part of my bees in the cellar. This was not convenient now, so that I had to make packing-cases for a number.

These packing-cases I made on a plan somewhat different from what I have used before, and it is this method of packing that I propose to tell about in this article.

Heretofore I have always packed each hive in a packing-case by itself, making a box of light lumber about 8 inches larger each way than the hive, without top or bottom. This was set over the hive, a "bridge" being placed over the entrance, after which leaves, planer-shavings, or some similar material were packed all around and over the hive, the whole being covered with a sheet of corrugated iron for a roof. This plan of protection has always proved very successful with me, and with some slight modifications I expect to continue it, having now about 200 colonies thus packed.

There are some decided advantages in having every hive entirely independent of every other hive. There are other very pronounced advantages in making a packing-case large enough to hold several colonies. Among these are a considerable saving in lumber, and a much greater economy of heat, as the several colonies in a "tenement" pack-

ing case mutually help to keep their neighbors warm.

My new packing-cases are made to take in 4 colonies. Four hives are placed close together, two facing east, with their backs close against the backs of another pair facing west.

These hives are upon the Heddon hive stands, which raise them from the ground about 5 inches. The bottom-boards are loose—I wouldn't have any other kind—and the hive is raised from the bottom-board, and what I call a "wintering rim" placed between. These rims raise the hive about 2 inches from the bottom-board. The sides project beyond the front of the hive, and on this projecting part is nailed a board that forms a "bridge" to make a passageway through the packing material. The front of this rim is so made that the entrance is at the top of the rim. This rim allows the bees to cluster in a compact bunch below the frames, which they will almost always do if they have the chance.

The bees that die in the hive drop to the bottom, instead of clogging up the spaces between the frames, and the entrance being at the top of the rim, it isn't easily stopped by dead bees from within, or snow or ice from without, as there is a half-way two inches high with the entrance at its top.

The sides of the packing-box are nailed up separately, and then lightly tacked together at the corners. The nails holding them at the corners are not driven clear in, so that they are easily drawn with a hammer in the spring, and the sides piled up until they are needed again, thus occupying but little space, and lasting much longer than if they were kept nailed up in the large boxes. This also makes the removal of the packing much easier.

As covers for these I have made roofs of various styles, of boards covered with shingles, tin, sheet-iron, and paper. I do not like any of these very well, as it is hard to make a substantial roof in this way without having it too heavy to be easily handled. I think that in the future I shall use, as in the smaller packing-cases, sheets of corrugated iron simply laid over the top of the box and weighted down so that the wind will not blow them away.

In these packing-cases the bees will remain until next June. Those that are likely to need more honey will be looked over as soon as warm weather comes, but all that I know have stores enough, and that show by their manner of working that they have a good queen

will not be disturbed until the honey harvest is near at hand.

As long as things are going well with a colony of bees, they are better off without any interference from the bee-keeper, and this is especially the case in the early spring, when all unnecessary opening of the hive should be avoided.

Ottawa, Ills., Dec. 19, 1892.



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Texas Weather—Honey in 1893.

This is Dec. 22nd, and bees have not had a flight for three days. It has been raining almost all the time, but it is not cold yet. We had ice only on two or three mornings, so far. We expect a little "norther" any time from across the peach orchard, forcing us to put on wraps and overcoats. I really would be glad to see a little snow, but often we go clear through the whole winter without any.

Southern bee-keepers, look out. I look for one of those old-time bee years, that makes this our land flow with milk and honey. Why? Just because we have had fine fall and winter rains, and horse-mint and other honey-furnishing plants are growing finely, which means honey next year. MRS. JENNIE ATCHLEY.

Greenville, Texas.

Cleaning Propolized Separators.

I want to thank Miss Emma Wilson for that valuable recipe by which tin separators, etc., can be cleaned of propolis, which was published on page 80. In order to show its value, I will explain.

I have about 2,500 tin separators to clean every season. Until last spring, the glue was scraped off with a case-knife, which scratches the tins, is slow and tedious, and, worst of all, it is bound to leave some stains, and bees,

like people, are ashamed of the daubing that others do, and therefore cover up those stains with a new coat of glue, from end to end. (If you don't believe it, try a row of stained sections in a case of clean, smooth ones, and be satisfied).

But now I heat some water to the boiling point, dissolve in a box of concentrated lye, throw in my separators, stir them a little, and with a pitch-fork throw them out on some straw, and pour some clean water over them. I then spread them out, or set them up on end to drain and dry—and the job is done. The tins are as bright and clean as new.

Now you can see what I have gained by that one article in the AMERICAN BEE JOURNAL, and there are thousands of others who, no doubt, have tried it and found it good, and, like myself, come very nearly forgetting to say, "Thank you." But some say, "Oh, they get paid for it!" I doubt whether the writer or editor ever gets full value.

Savanna, Ills.

JNO. HANDEL.

The Season of 1892.

My report for 1892 is as follows: Spring count, 16 colonies; fall count, 18; 7 natural swarms; and I took 400 pounds of honey with the extractor. I fed 100 pounds of granulated sugar for winter stores, and put 16 colonies of my bees into the cellar on Dec. 10; 2 are packed on the summer stands, and are wintering nicely so far. This has been the poorest year for bees since I have been in the business, but white clover never looked any better in this vicinity, and as basswood did not bloom this year, I have good hopes for 1893.

L. GEORGE.

Oakwood, Wis., Dec. 19, 1893.

That Queen-Bee Experience.

On page 828 Mr. Kauffman tells his experience with a queen-bee, and wants to know what made her do as she did. She was not to blame for going up the tree, nor over the house and being struck with a lightning-rod. But she was to blame for going off and staying two days in a snow-storm, when she came from the South. If it had been one of our Northern queens I should not have wondered at it so much. She is from a hardy race, I should think. I wish he would send me one of her daughters by telegraph.

CHAS. TAREY.

Houghton, N. Y., Dec. 24, 1892.

He Says the Bees Did Well.

Bees have done well this year. I had 6 colonies, spring count; one became queenless and died, one stored no surplus, and from the other four I took 250 one-pound sections of nice white honey. I have 6 colonies packed in forest leaves on the summer stands, and 3 in the cellar, all well supplied with winter stores, from which I hope for still better results next summer. My bees, which were wintered on the summer stands, stored more surplus honey than those wintered in the cellar. LEVI HIGGINS.

Orion, Ills., Dec. 22, 1892.

Temperature in November, 1892.

I want to conduct a sort of "weather bureau" for the use of bee-keepers, with the aid of several other bee-keepers in different parts of the country. It will likely prove to be very interesting when once in proper running order.

The first report is as follows, for the month of November, 1892:

(Freezing (32 deg.) given as the meridian line.)		
1st day,	6°	above freezing.
2nd "	6°	" "
3rd "	6°	" "
4th "	8°	" "
5th "	12°	below "
6th "	4°	" (Rain)
7th "	6°	above " (Snow squalls)
8th "	6°	below "
9th "	4°	" "
10th "	8°	" "
11th "	2°	" "
12th "	3°	" "
13th "		freezing.
14th "	2°	above "
15th "	1°	below " (Bees had
16th "	2°	" [a flight)
17th "	6°	above "
18th "	2°	" "
19th "	2°	" "
20th "	18°	" "
21st "		freezing.
22nd "	4°	below "
23rd "	20°	" "
24th "	22°	" "
25th "	8°	" "
26th "	5°	" "
27th "	7°	" "
28th "	10°	" (Bees had
29th "		freezing. [a flight)

It was cloudy every day but three during the month, with heavy winds. The temperature was taken when near sunrise each day. The above is for 22° north latitude. On the 2nd and 5th of October was the first frost of the fall.

At Floyd, Tex., for the same period of time the temperature stood about the same until about the 20th, ranging from 45° to 50° above zero, then they had a rain which brought it down to 35° for a week; then it turned colder, and on Dec. 1st they had their first frost of any note. Mrs. Jennie Atchley reports this from Texas.

At Hamilton, Ills., 40° north latitude, the coldest day was about the 18th—14° below freezing. The last time bees flew was on Nov. 30th, the mercury showing 43° in the shade, and the wind in the east. Chas. Dadant & Son reports the above for Illinois. JACOB MOORE.

Ionia, Mich.

Just Before the Battle.

The "grand army" of honey-producers in Ontario have held a council of war, and in a few days will march to the annual meeting at Walkerton, Ont., and blow up the sugar-honey magazine. I believe that every real honey-producer is going to use his "Winchester" on the sugar-honey business, and fight it, war to the knife. WM. McEVOR.

Woodburn, Ont., Dec. 30, 1892.

CONVENTION DIRECTORY.**Time and place of meeting.**

1893.
 Jan. 10-12.—Ontario, at Walkerton, Ont.
 W. Couse, Sec., Streetsville, Ont.
 Jan. 13, 14.—S.W. Wisconsin, at Boscobel, Wis.
 Edwin Pike, Pres., Boscobel, Wis.
 Jan. 12-14.—Minnesota, at Minneapolis, Minn.
 A. K. Cooper, Sec., Winona, Minn.
 Jan. 16, 17.—Colorado, at Denver, Colo.
 H. Knight, Sec., Littleton, Colo.
 Jan. 18, 19.—Indiana, at Indianapolis, Ind.
 G. P. Wilson, Sec., Tolgate, Ind.
 Feb. 7, 8.—California, at Los Angeles.
 John H. Martin, Sec., Redlands, Calif.
 May 4.—Allegany Co., at Belmont, N. Y.
 H. C. Farnum, Pres., Transit Bridge, N. Y.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association
 PRESIDENT—Eugene Secor, Forest City, Iowa.
 SECRETARY—W. Z. Hutchinson, Flint, Mich.

National Bee-Keepers' Union.

PRESIDENT—James Heddon, Dowagiac, Mich.
 SEC'Y AND MANAGER—T. G. Newman, Chicago.



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The Date on the wrapper-label of this paper indicates the end of the month to which you have paid for the *JOURNAL*. If that is past, please send us one dollar to pay for another year. This shows that Mr. Porter has paid his subscription up to the end of December, 1893:

Wallace Porter Dec93
Suffield, Portage co, Ohio

Convention Notices.

INDIANA.—The Indiana State Bee-Keepers' Association meet at Indianapolis, Ind., on Jan. 18 and 19, 1893. G. P. WILSON, Sec. Tolgate, Ind.

ONTARIO, CAN.—The annual meeting of the Ontario Bee-Keepers' Association will be held in Walkerton, Ont., on Jan. 10, 11 and 12th, 1893. All interested in bee-keeping are cordially invited to be present.
Streetsville, Ont. W. COUSE, Sec.

COLORADO.—The Colo. State Bee-Keepers' Association will hold their annual meeting in Denver, on Jan. 16 and 17, 1893. Election of officers and other important business will come before the meeting.
Littleton, Colo. H. KNIGHT, Sec.

CALIFORNIA.—The 2nd annual meeting of the California State Bee-Keepers' Association will be held in the Chamber of Commerce in Los Angeles, Calif., on Feb. 7th and 8th, 1892. Programmes will soon be issued, for which address,
Redlands, Calif. JOHN H. MARTIN, Sec.

NEW YORK.—The next meeting of the Allegany County Bee-Keepers' Association will be held at Belmont, N. Y., on May 4th, 1893, in the Hotel Belmont. All bee-keepers are invited to attend and make it what it should be—an interesting meeting.

H. C. FARNUM, Pres., Transit Bridge, N. Y.

MINNESOTA.—The annual meeting of the Minnesota Bee-Keepers' Association will be held at Minneapolis, on Thursday, Friday and Saturday, Jan. 12, 13 and 14, 1893. The Thursday meeting will probably be a union meeting with the Horticultural Society which meets at the same place, commencing on Tuesday.
Winona, Minn. A. K. COOPER, Sec.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next annual meeting at Boscobel, Grant Co., Wis., on Jan. 13 and 14, 1893. All members of the Association are requested to be present as the following officers are to be elected: President, Vice-President, Secretary, Assistant Sec., and Treasurer. Blank Reports will be sent each member, for the year 1892, with instructions. A cordial invitation is extended to all bee-keepers, and especially to those that would like to join with us. Each member will be notified at least one month before the meeting.
Boscobel, Wis. EDWIN PIKE, Pres.

Doolittle's Queen-Rearing book should be in the library of every bee-keeper; and in the way we offer to to give it, there is no reason now why every one may not possess a copy of it. Send us one new subscriber for a year, and we will mail the book to you bound in paper, as a present.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the *BEE JOURNAL*. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, December 31st, 1892:

CHICAGO, ILL.—Demand for comb honey is quite good, and choice lots bring 18c., others in proportion. Extracted, 6@9c., according to what it is—sales chiefly at 8@9c.
Beeswax—23@25c. R. A. B.

CHICAGO, ILLS.—Honey of all kinds is plentiful excepting choice white comb. There is no activity, owing to the closing of the year. A good business is expected after New Years. Comb—white, 16@17c.; dark, 14c. Extracted—white, 9c.; dark, 7@8c.; Southern, 75@80c. per gal. J. A. L.

KANSAS CITY, MO.—Receipts and stocks very light, demand good. We quote: No. 1 white 1-lbs. 16@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs. 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6.
Beeswax—20@23c. C. M. C. C.

CINCINNATI, OHIO.—Demand is good for honey, with scant supply of all kinds. Extracted brings 6@8c., and comb sells at 14@16c. for best white. Although honey is scarce, there is no demand for dark comb.

Beeswax—Demand good, at 20@25c. for good to choice yellow. Supply good. C. F. M. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality. 1-lbs. Beeswax is neglected at 22@23c. S., L. & S.

BOSTON, MASS.—Comb honey is selling slow, very much slower than we like to have it, and it is our experience that when we start honey in at a high price, it sells hard right through the season. We quote our market nominally at 17@18c. for best white honey, 1-lb. combs. Extracted, 8@9c.

Beeswax—None on hand.

B. & R.

KANSAS CITY, MO.—Demand good, supply very light. White 1-lbs., 16c. Extracted, 6@7c. No beeswax on the market. H. & B.

MINNEAPOLIS, MINN.—The market is good. We quote: Fancy white, 1-lbs. sell fast at 18c.; 2-lbs. 16@17c. Buckwheat, comb, 13@14c. Extracted, in barrels, 7@8c.; in 5 or 10 lb. kegs., 9@10c. J. A. S. & C.

NEW YORK, N. Y.—Our market is quiet. Arrivals are freely, and the demand limited. We quote: Fancy white, 1-lbs., 15@16c.; 2-lbs., 12@13c. Fair white, 1-lbs., 12@13c.; 2-lbs., 11c. There are large stocks of buckwheat honey on our market, and we know of two lots of fancy 1-lbs. that sold at 8 and 9c. per lb., respectively. We quote 1-lbs. glassed or in paper-boxes, 10c.; unglazed, 9c. Extracted is in good demand at 8@8½c. for basswood and white clover; 6@6½c. for buckwheat; 70@75c. per gallon for Southern.

Beeswax—Dull at 25@27c.

H. B. & S.

ALBANY, N. Y.—Honey market some quieter and prices some easier. White clover, 15@17c.; mixed, 14@15c.; dark, 10@11c. Extracted, white, 8@8½c.; mixed, 7@7½c.; dark 7c. Stocks light of both comb and extracted.

Beeswax, 27@28c.

H. R. W.

“Bees and Honey”—see page 5.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT, 161 South Water Street.
J. A. LAMON, 44 & 46 South Water Street

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN,
28 & 30 West Broadway.

San Francisco, Calif.

SCHACHT, LEMCKE & STEINER, 10 Drumm St.

Minneapolis, Minn.

J. A. SHEA & Co., 14 & 16 Hennepin Avenue.

Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.
CLEMONS-MASON COM. CO., 521 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway.

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at 10 cents per line, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—A good Second-Hand Well-Drill. Give description, and lowest cash price.
ALFRED SOPER,
26A3t Eau Claire, Wis.

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J. FORNCROOK & CO.

WATERTOWN, Jeff. Co., Wis., Jan. 1st, 1893

Mention the American Bee Journal.